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ABSTRACT

Arguing that some books and documents must be conserved because they have scholarly value as well as for the information they contain, this report presents reasons for preserving such artifacts and recommends means of developing effective and efficient preservation strategies. Two strategies are suggested. The first advises identifying and ranking all artifacts of the greatest value and proceeding through a master list with preservation treatment as resources become available. The second advocates identifying materials on the basis of the urgency of need for preservation treatment--i.e., materials in fragile and embrittled conditions that are frequently exposed to the stresses of normal scholarly use. Strategy considerations are discussed, including the cost of preservation treatment and gauging the appropriateness of a treatment by measuring its ability to capture all information of significance. Alternatives to expensive or "full" treatments--which can cost from several hundred to more than $1,000 per book--are also suggested. These alternatives emphasize preventive measures to reduce rates of deterioration and wear: (1) controlling the environment; (2) protective enclosures to mitigate the effects of poor environment or housing arrangement; and (3) sensible handling and use practices. Mass deacidification is mentioned as a major component of future strategies for artifact preservation. (SD)

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REPORT

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ON THE PRESERVATION OF BOOKS AND DOCUMENTS IN ORIGINAL FORM

Barclay Ogden

The national preservation program can save the contents of millions of brittle books through mass microfilming, but many library materials with scholarly value as artifacts also are in need of preservation. This paper provides an intellectual rationale for consideration of the book as an artifact and discusses possible selection strategies to provide a context for further exploration of these issues.

INTRODUCTION

Some books and documents must be preserved in original form because they have scholarly value as objects as well as for the information they contain. The challenge of preserving these materials, called artifacts, requires an understanding of the scholarly value of artifacts and the development of an effective and efficient strategy for their preservation.

Research libraries and archives collect information recorded on paper, film, and, more recently, analog or digital tape and disks, all of which have finite life spans. When the original paper, film, and other information media or "formats" deteriorate sufficiently to threaten loss of the information recorded on them, a major preservation decision needs to be made: If the information is to be preserved, what is the most effective and economical preservation technology to use?

The decision can be difficult because no preservation technology is perfect; some information is lost in order to save other information, and decisions are made to save what is regarded at the time as information most likely to be of enduring scholarly value. Libraries and archives are filled with examples of compromises made to preserve some information at the expense of information considered to be of less importance. Microfilms and photocopies capture text but commonly lose much of the detail and tonal range of illustrations. Repairs and restorations alter original books and documents, no matter how carefully they are done. Even library bindings change forever the appearance of books as published by replacing original, sometimes illustrated, covers with serviceable, if unappealing, buckram.

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The Commission on Preservation and Access was established in 1986 to foster and support collaboration among libraries and allied organizations in order to ensure the preservation of the published and documentary record in all formats and to provide enhanced access to scholarly information.

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For books and documents whose scholarly value lies entirely in a reasonably faithful representation of text and illustrations, the choice of an appropriate preservation technology can be made on the bases of technical fidelity of various reformatting technologies, the kind of access needed to the preserved information, and relative costs. For many materials of scholarly value at risk of loss from deterioration, microfilm is the preservation technology of choice because microfilm "captures" text well, and the text is of greatest scholarly value.

For materials valued for detailed, continuous-tone or multicolored illustrations, microfilm has not proven to be a good preservation technology. Moreover, materials made less useful by reformatting from paper to microfilm because the mode of access is less satisfactory are not considered good candidates for this preservation technology.

Even more challenging is the preservation of books and documents whose original formats have scholarly value as objects. These materials have scholarly value that encompasses both the value of the text and illustrations and, additionally, an object or "artifact" value that is inseparable from the original format of the materials. They cannot be microfilmed without loss of part of their scholarly value. But exactly what are artifacts, what is their importance to scholarship, and how can artifacts be preserved effectively and economically?

Artifacts and Information

Artifacts are often thought of in terms of rarity or uniqueness, age, and monetary worth. Although these characteristics frequently are found in artifacts, they do not of themselves determine scholarly value. Many books and documents are old and rare but contain little scholarly value, while some new documents may be of great importance. Similarly, the monetary value of some documents as collectors' items has little relation to those documents' importance to scholarship.

Most artifacts are valued primarily as evidence or proof of the accuracy of the information they contain. Original documents are essential for many legal and scholarly purposes as proof of authenticity. The authenticity of text, even its legal credibility, may depend on an analysis of the format. Erasure marks impressed upon the surface of a hand-drawn map warn that a location or boundary may have been falsified. Pages tipped into already-bound books sometimes suggest that parts of texts may have been changed. Pasted-on changes to a typescript distinguish an author's original words from those that found their way into print.

An original document is proof or evidence of how (and sometimes when and where) the document was made: the type of paper with its watermark, printing or writing ink, the binding materials, glues, leather, and cloth. This evidence constitutes information about the history of the technologies involved in the manufacture of the document and often can help determine the date of an undated or inaccurately dated document.

Some artifacts are preserved because they are exceptionally fine examples of their technology or are artistic expressions. Some manuscripts, prints, drawings, and photographs made to record historical events were so finely done that they have acquired aesthetic value as well as value as historical documents. Some bookbindings are not only exquisite examples of their craft but also are artistic expressions wrought in leather, thus taking on the value of museum objects.

In all of the above examples, the format itself has something to contribute to the understanding of the book or document. Whether "proof" of authenticity, "evidence" of manufacture, or technological or artistic "expression," at least part of the scholarly value of the record is inseparable from its format. Can a copy, no matter how good, of a book or document offer the same proof of authenticity as the book or document in original form? (The admissibility in court of copies of original documents grapples with part of this question.) How can a facsimile provide evidence

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of the original manufacture of a book or document? Perhaps some forms of artistic expression would be less dependent upon original format if we had a preservation technology that could precisely duplicate the original and thus carry the same expression, but to date there is no preservation technology with this capability.

When the original form or format contributes to the scholarly value of the record, the record becomes an artifact. Consequently, the original format of an artifact cannot be destroyed without reducing the record's scholarly value. From the perspective of making a preservation decision, should not we consider the original format to be "information" of scholarly value comparable to the words and illustrations more typically thought of as information?

By considering artifacts as information, artifacts could be subjected to the same scholarly and technical review given to all records considered for preservation. Books and documents valued exclusively for their contents currently are preserved only if that information is deemed to be of sufficient scholarly value to justify the cost of its preservation. Analogously, artifacts would be preserved only if their "information" is deemed of sufficient scholarly importance to merit preservation, knowing that preserving these materials means preserving them in original format.

Though not the primary consideration of this paper, in addition to artifacts there is a second category of books and documents that must be preserved in original format. These are library materials whose information cannot be captured by the currently available reformatting technologies of microfilming or photocopying. Art and art history, archaeology, architecture, geology, geography, the life sciences, and other subjects are heavily dependent upon illustrations that feature fine details, continuous tone, and color. Moreover, illustrated materials often are published in oversized formats with frequent foldouts. All of these characteristics make demands beyond the capabilities of filming and photocopying. Digitization is likely to overcome many of the limitations of current technologies, but it is not yet available for preservation applications. While they are not artifacts as described above, many illustrated materials also must be preserved in original form until a suitable reformatting technology is available for their preservation.

With many materials, and illustrated materials in particular, satisfactory preservation solutions are further limited by requirements for access. For example, comparisons among illustrations in art history texts require consultation of several images simultaneously, a difficult feat on a film or fiche reader. Reference books need random access for quick look-ups, which are not at all suited to the sequential access of the microfilm format. Thus the reformatting technology not only must capture all significant information, but also must provide quality of access equal to that of the original format if it is to be fully satisfactory.

If all books and documents of significant scholarly value are to be preserved, including artifacts and library materials for which a suitable preservation technology is not yet available, we must extend our efforts to preserve some records in original format. The information value of some formats in and of themselves, limitations of current preservation technologies to capture all significant information, and occasional special requirements for access indicate a need for a strategy for preservation of selected books and documents in original form.

A Strategy For Preservation in Original Format

Traditionally, libraries and archives independently have undertaken activities to preserve their collections by providing proper housing, protection from fire and theft, library binding, and occasional repair and restoration. Now libraries with custody of the nation's research collections realize that a greater commitment of library resources is required to preserve their very large, deteriorating collections. The single, but monumental, problem of deterioration of library collections caused by embrittlement of paper alone has drawn considerable national attention along with additional

funding. Activities in preservation are expanding with a current emphasis on addressing the "brittle books" problem through a large-scale national cooperative microfilming program for non-artifactual materials.

But we know that microfilming cannot preserve the scholarly values represented by artifacts. Moreover, we know that there are many millions of artifacts in the nation's research libraries and archives. Treatments to preserve artifacts can be individually expensive, and there appears to be little hope for resources sufficient to address at any one time more than a small fraction of the total number of artifacts ultimately in need of preservation. These facts appear to argue for a strategy to minimize the number of artifacts that would need to be preserved at any one time, to evaluate their scholarly importance to ensure that limited resources are used wisely, and to provide appropriate and economical preservation treatments.

One possible preservation strategy could be to identify and rank all artifacts of the greatest scholarly value and to proceed through a master list with preservation treatment as resources become available. This strategy could ensure that the materials of greatest scholarly value receive treatment first, should funds be insufficient to treat all artifacts of scholarly value.

A second possible preservation strategy could be to identify materials on the basis of urgency of need for preservation treatment. Like other library and archive materials, artifacts deteriorate from chemical attack and wear out from use, but only those deteriorated artifacts in demand for study, exhibit, and loan are at the greatest preservation risk. The combination of their fragile and embrittled condition and the stresses of normal scholarly use renders these materials extremely vulnerable to damage and loss.

A strategy to review materials for preservation treatment when they are used could "trigger" the preservation process for materials most at risk while postponing review of materials less at risk of damage or loss because they are not currently in demand. For materials in urgent need of preservation treatment, the succeeding steps of the preservation process could be scholarly review for artifactual value and selection of appropriate treatments.

Both strategies would need careful consideration by scholars and librarians to determine their appropriate applications, because each has strengths and limitations. Very simply put, the first strategy focuses on preserving the most important artifacts first; the second strategy focuses on preserving first those artifacts most at risk of loss. The success of the first strategy depends upon the construction of a master list upon which scholars both within and among all fields can agree, and an acceptance by all that artifacts of less-recognized scholarly value but at greater preservation risk could be lost due to deferment of preservation treatment.

The success of the second strategy, based on urgency of need, depends on a continuing availability of resources sufficient to meet the needs of materials most at risk for the indefinite future. Moreover, this strategy must acknowledge the possibility that some artifacts of scholarly value would not be used (or reviewed) throughout their "shelf life" and therefore could be lost.

A further strategy consideration, independent of cost, is the questionable desirability of treatment of artifacts not in urgent need of preservation. Most treatments entail some alteration of the artifacts, thus risking loss of unrecognized information of significance. Further, treatments can cause unintended damage. For example, rebinding manuscripts and early printed books eliminates whatever information original bindings could yield to help date and place texts. Damage can be found in too many libraries and archives where treatments done to the best standards of the time ultimately have proven to be harmful to the artifact. Strong paper bleaches, aggressive adhesives, and poor-quality repair materials have reduced the lives and usefulness of many artifacts.

Perhaps the least obvious (and most commonly overlooked) problem with the effectiveness of any preservation technology that reproduces or alters the original, no matter how "faithful" the reproduction or unobtrusive the alteration, is that the scholar is left with information less reliably accurate than that in the unaltered original format. Consequently, a preservation strategy for artifacts might include a guideline that no treatment should be undertaken unless the risk of damage from delay or inaction is judged to be the greater risk.

A preservation treatment must be appropriate and economical. Its appropriateness is measured by its ability to capture all information of significance. The scholar must be prepared to identify now what information is significant for current and future study in order to ensure that it is captured. Can a scholar always tell a conservator which attributes of an artifact are significant and must be preserved? The remote possibility of identifying all artifactual information that will in the future be significant about a book or document, combined with the inherent compromises between information saved and information lost during the preservation treatment process, appears to argue further for a preservation strategy to restrict extensive preservation treatment only to books and documents that have artifactual significance and that are in urgent need of treatment.

Some treatments used to preserve materials in their original formats are very expensive. "Full conservation," or restoration, including chemical treatment and repair done to minimize its visual intrusiveness, can cost several hundred to more than a thousand dollars per book or document, depending on extensiveness of treatment. Relatively few artifacts can justify the costs of extensive preservation treatment but, fortunately, not all artifacts in need of preservation require extensive treatment. Most artifact treatments undertaken in many institutional preservation programs are minor, but are sufficient to enable the continued safe use of artifacts at a per-item cost of less than fifty dollars.

The vast majority of all artifacts could be preserved without treatment and at low cost through preservation measures to reduce their rates of deterioration and wear, thereby extending their lives and minimizing the number of artifacts in need of treatment at any one time. Controlling the environment (temperature, relative humidity, air impurities, and light levels) reduces the rate of deterioration; protective enclosures mitigate the effects of a poor environment or housing arrangement and reduce wear; sensible handling and use practices help preserve artifacts for many decades of continued research. Soon chemical treatment, "mass deacidification," will be available to reduce the rate of chemically caused deterioration. These measures could be the major components of a strategy for artifact preservation, with extensive treatment as a relatively minor component.

As with preservation of all library and archival materials, a strategy for preservation of books and documents in original format needs to encompass a justification for resources, methodologies for selection (assuming fewer resources than needs), and a range of preservation technologies able to match problems with solutions. Certainly artifacts could be claimed to have scholarly value sufficient to justify significant resources for their preservation. A preservation strategy could be crafted to meet the needs of both the most important artifacts and those most at risk. But the success of the effort will depend upon the involvement of scholars and librarians not only in identifying books and documents that must be preserved in original format, but in fully understanding the nature of the preservation problem to be solved and in developing a strategy for its solution.